



The Parker Ranch installation in Hawaii

## Residential Building Audits and Retrofits

**Casey Murphy**

ICF International

DOE's Technical Assistance Program (TAP) supports state, local and tribal officials implementing the Energy Efficiency and Conservation Block Grant (EECBG) and the State Energy Program (SEP).

TAP offers tools and resources needed to implement successful and sustainable clean energy programs.



**Goal:** Provide SEP & EECSBG recipients with resources needed to swiftly implement successful and sustainable clean energy programs.

**Objectives:** To provide proactive assistance, technical expertise, best practices, network expansion, and policy & program development in order to:

- Accelerate grantee's implementation
- Improve program and project performance
- Increase the return on Recovery Act investments
- Increase the sustainability of Recovery Act investments
- Build protracted capacity at the state, local, and tribal level

## TAP offers EECBG and SEP recipients:

- One-on-one assistance
- Extensive online resource library (best practices, templates, webinars, project map, events calendar, TAP blog)
- Facilitation of peer exchange of best practices and lessons learned

## On topics including:

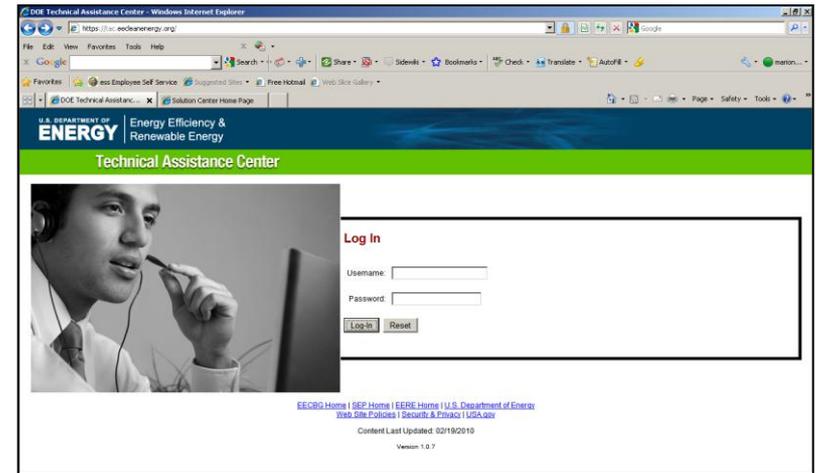
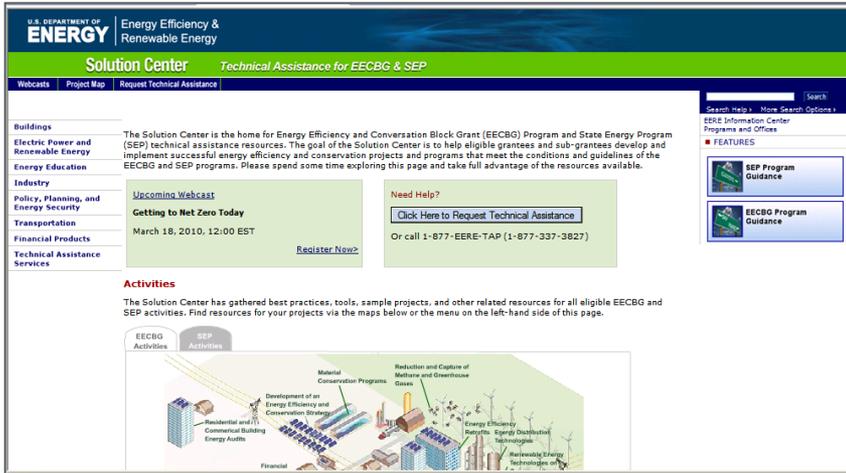
- Energy efficiency and renewable energy technologies
- Program design and implementation
- Financing
- Performance contracting
- State and local capacity building

# TAP is DOE's Opportunity to Help You!

## We encourage you to:

1) Explore our online resources via the [Solution Center](#)

2) Submit a request via the [Technical Assistance Center](#)



3) Ask questions via our call center at 1-877-337-3827 or email us at [solutioncenter@ee.doe.gov](mailto:solutioncenter@ee.doe.gov)

Have a greater understanding of the local, regional, and national efforts to promote energy efficiency in residential buildings

Have a greater understanding of the programmatic elements of residential building audit and retrofit programs and how those may or may not align with your programs

Learn about additional resources that you can access to address residential retrofit issues and concerns

Address or answer specific programmatic issues about the DOE's EECBG grants – please contact your local regional coordinators

Address new homes or commercial building audits and retrofits

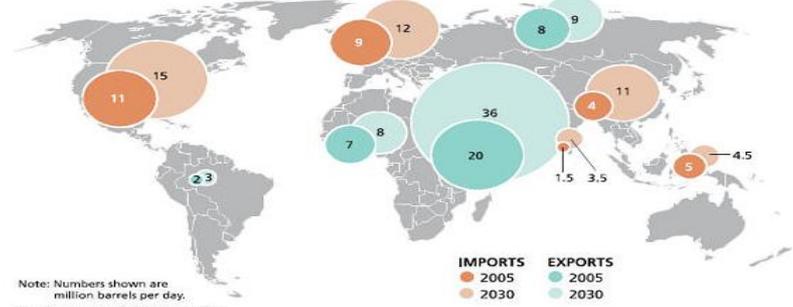
Address renewable energy strategies or programs

Provide specific guidance for designing your programs

- About Us
  - Speaker
  - Audience
- Context
  - Importance of residential sector energy use
  - History of addressing energy efficiency
  - Changing environment since 2008 (e.g., ARRA)
- Programmatic needs, frameworks and strategies
- Recent examples
- Resources

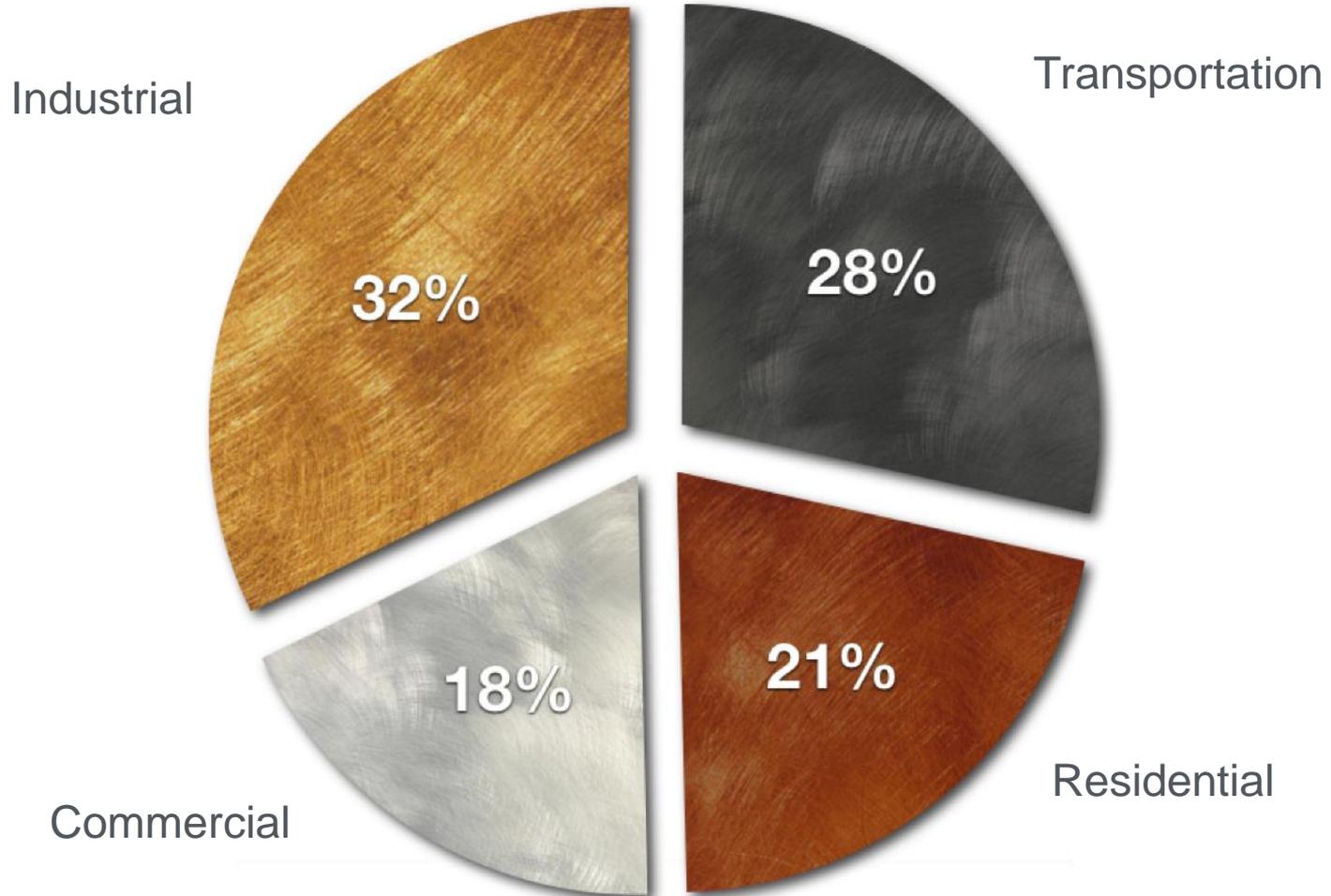
- Owned a framing/remodel company for 15 years
- Participating contractor in Maryland's Home Performance with ENERGY STAR program
- Supported utility programs that promoted energy efficiency goals
- For ICF International, currently supporting EPA programs
  - Home Performance with ENERGY STAR
  - Indoor airPLUS

- Most audience members are grantees and have a residential design finalized – working with consultants, as needed
- There are a wide variety of programs that are represented by audience members
  - Audit only programs
    - HERS based approaches
    - Clipboard
    - Other
  - Financing only – PACE, unsecured, other
  - Single measure
  - Mix of incentive levels

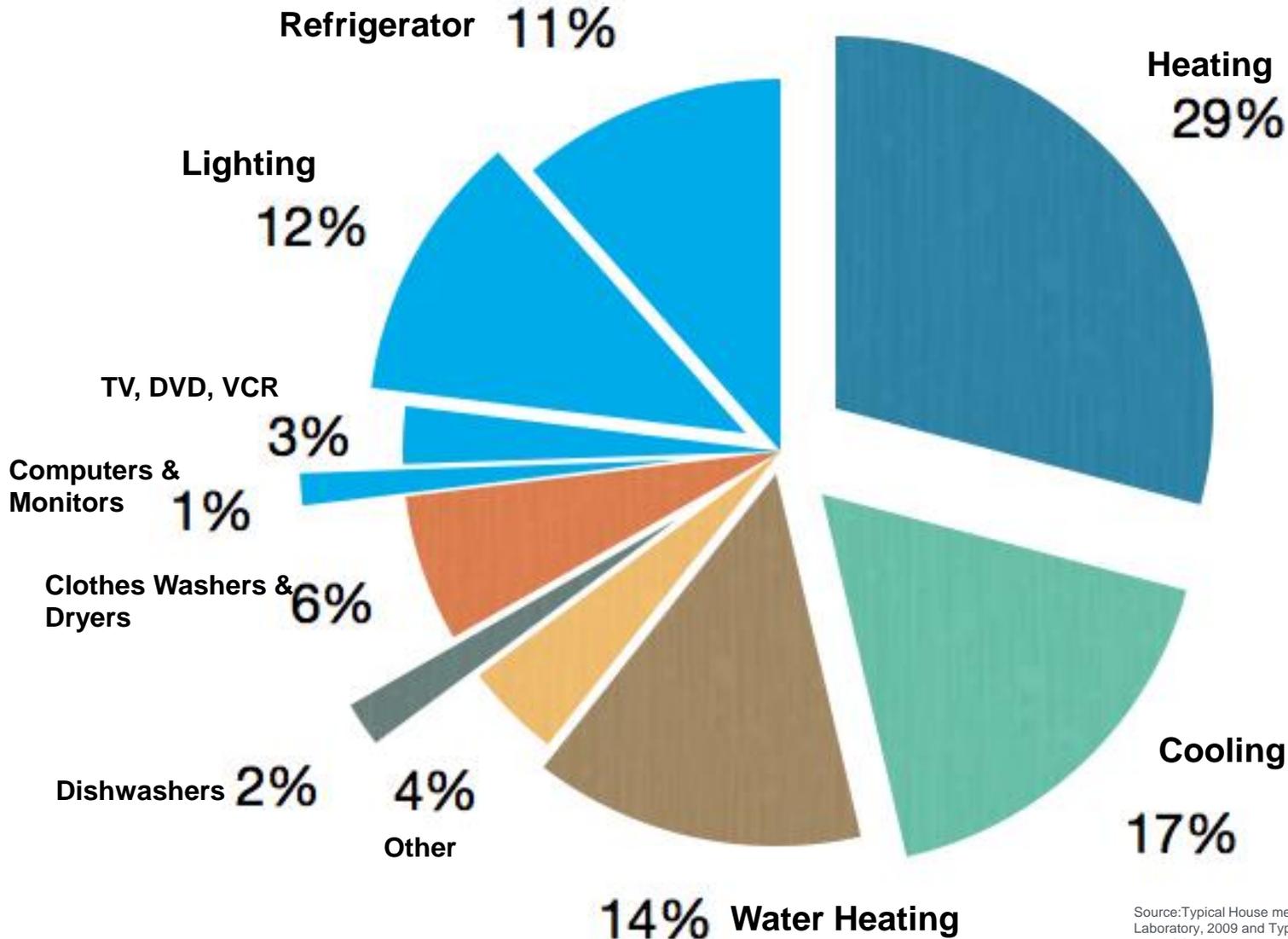


- That energy savings are the primary driving force for participation
  - Jobs
  - Carbon reduction
  - Total energy usage vs. peak load
  - Improving housing stock / tax base
  - Mitigating foreclosure concerns
  - Adding capacity to perform assisted work (weatherization)
  - Contractors, homeowners have even more value propositions

# Importance of Residential Sector



# Residential Energy Usage

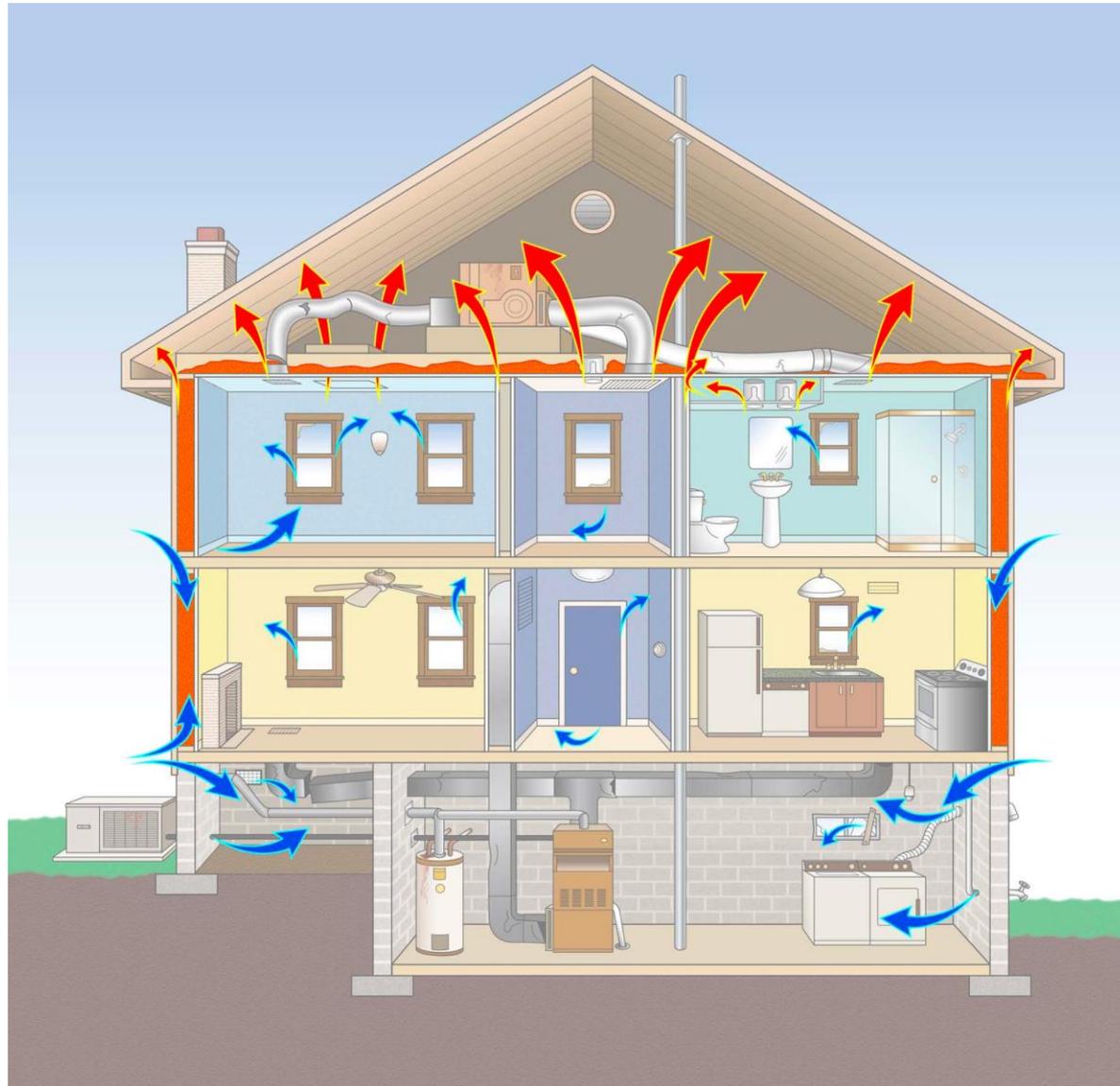


Source: Typical House memo, Lawrence Berkeley National Laboratory, 2009 and Typical house\_2009\_Reference.xls spreadsheet.

- “ENERGY STAR qualified products...and services are more energy efficient than conventional products...and services”
- There are no trade-offs in performance or quality



# House-As-A-System





# 70%

**Percentage of 2030 housing stock that have  
already been built today**

- “Weatherization” – DOE program or scope of work?
- “Audits” and “Retrofits” – title of today’s webinar
- Audits, surveys, assessments, clipboard audits, diagnostic audits, walk-through’s, etc.
  - Skills of auditors
  - Protocols
  - Status of auditor
    - Third party?
    - “Contractors”?
    - Sales person / facilitator / “energy advocate”?

# Examples of Existing Practices





Can we rely on existing trades to provide “retrofits”?

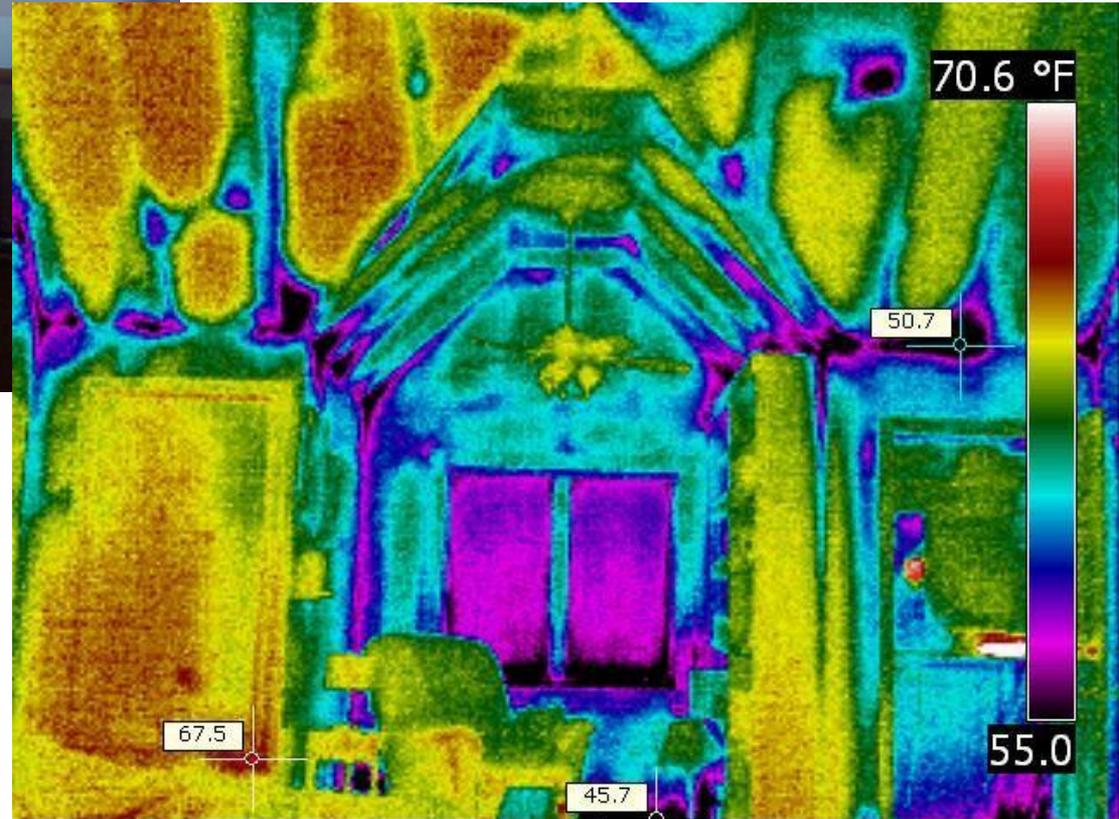


**Can you see this if you didn't pull up the insulation?**

**Will a walk-through audit catch this?**

**How do you confirm that this has been addressed after the work is complete?**

Do you need diagnostics –  
infrared camera?



# Examples of Existing Practices



**This looks  
like a good  
job.....?**

# Examples of Existing Practices



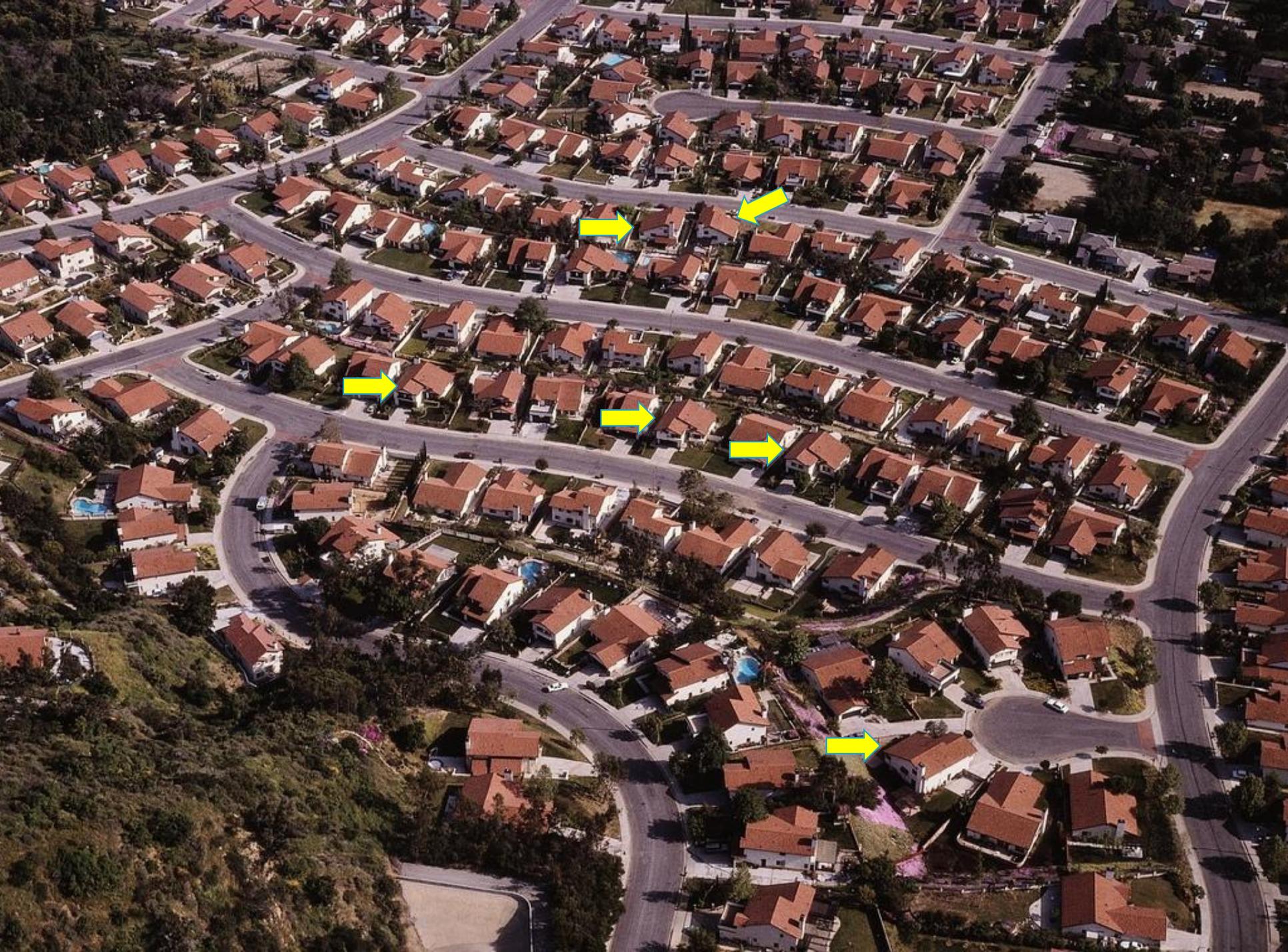
# Examples of Existing Practices





**1200 ppm of carbon  
monoxide**





An aerial photograph of a suburban neighborhood with many houses, swimming pools, and winding roads. The houses have red-tiled roofs and are surrounded by green lawns and trees. The roads are paved and have some cars parked along the sides. The overall scene is a typical suburban residential area.

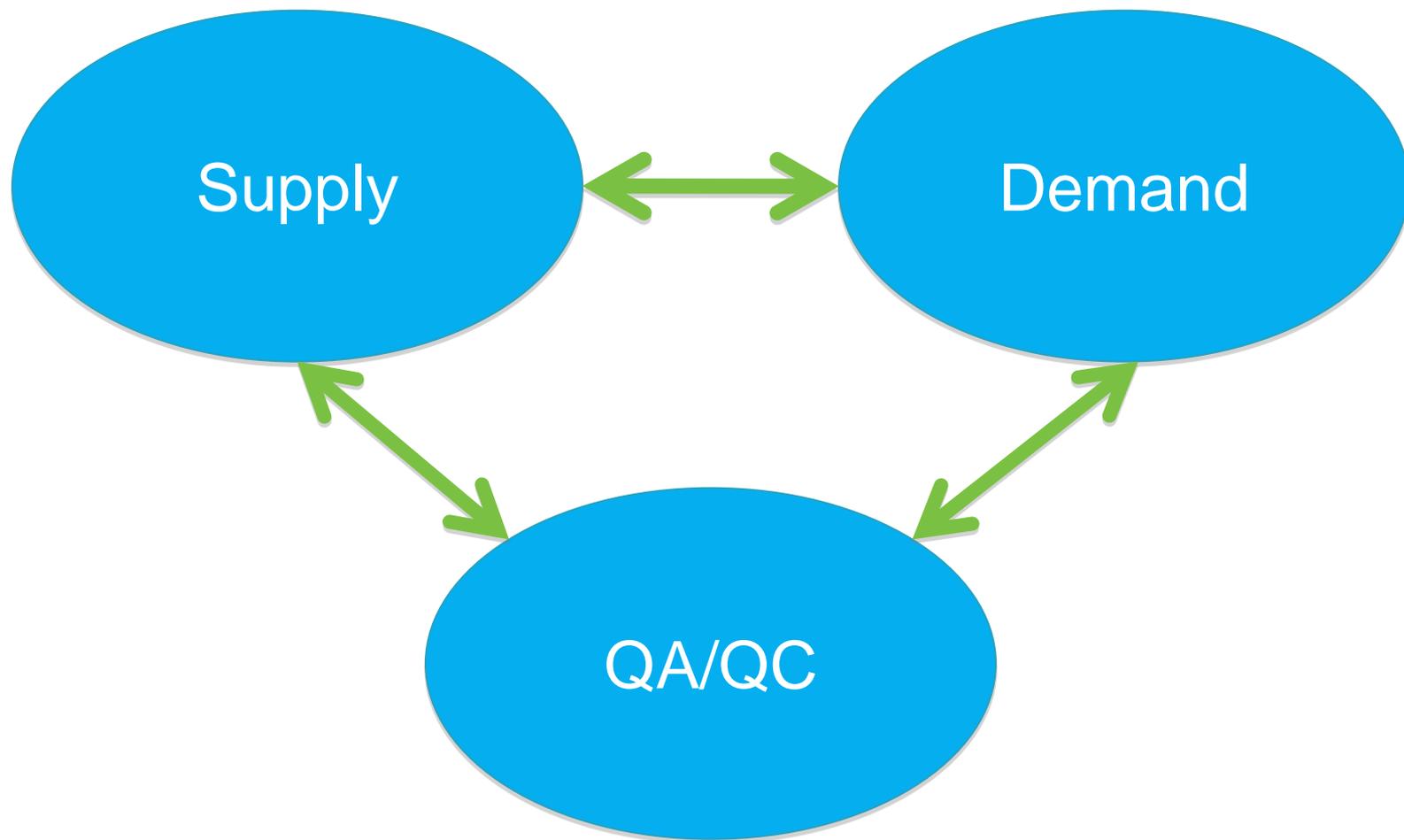
Whose furnace is producing CO?

Who has the cold room?

Who wants the addition?

Whose bill is too high?

- Audits, surveys, assessments, clipboard audits, diagnostic audits, walk-through's, etc.
  - Skills of auditors
  - Protocols
  - Status of auditor
    - Third party?
    - “Contractors”?
    - Sales person / facilitator / “energy advocate”?
- How do we verify and report QUALITY jobs – for the homeowner's sake and the program's sake?



- Supply
  - Identify, recruit, train, certify, mentor participants
  - Create training standards / define qualifications for program participation
  - Enable companies to differentiate themselves in the marketplace
  - Give them tools and resources to be profitable



The screenshot shows the Arizona Home Performance website. At the top, there is an orange banner with 'Arizona Home Performance' and a blue banner with the Energy Star logo and 'HOME PERFORMANCE WITH ENERGY STAR'. Below these are navigation tabs: HOME, BENEFITS, HOW IT WORKS, ENERGY UPGRADES, FIND A CONTRACTOR, SUCCESS STORIES, and FINANCING & REBATES. The main content area features a large blue button that says 'GET A REFERRAL' next to an image of a man in a hard hat and safety vest holding a clipboard. Below this is a 'Sign-up for our Newsletter' button. To the right, there is a section titled 'Rebates for Energy Efficiency Upgrades' with a sub-section 'Home Performance with Energy Star Rebates\*'. This section lists rebates for 'Sealing Air Leaks' and 'Improving/Adding Insulation'.

- Demand

- Educate homeowners – about energy usage, the program, and the process
- Identify and overcome barriers to purchase
  - Cost of initial audit
  - Lower total costs via rebates
  - Enable homeowners to finance cost-effective solutions

- Quality
  - Provide tools and training to do good work
    - Software
    - Forms, processes that work for the participants
  - Trust but verify
    - Strong QA – for both the homeowners and the company participants



# YOUR HOME CONTRIBUTES TO THE QUALITY OF THE ENVIRONMENT

U.S. Environmental Protection Agency • U.S. Department of Energy

[About ENERGY STAR](#) - [News Room](#) - [FAQs](#) - [KIDS](#)

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[Home](#) > [Home Improvement](#) > [Home Performance with ENERGY STAR](#)

## Home Performance with ENERGY STAR

A drafty home, rooms that are too hot or too cold, and high energy bills are all common issues for homeowners. A quality installation of a new heating or air conditioning system, buying replacement windows, or adding more insulation may fix part of the problem. But the way to better results is through an integrated "whole-house" approach that looks at your house as a system.

Home Performance with ENERGY STAR, a national program from the U.S. EPA and U.S. DOE, offers a comprehensive, whole-house approach to improving energy efficiency and comfort at home, while helping to protect the environment.

Contractors participating in a locally-sponsored Home Performance with ENERGY STAR program can help you cost-effectively improve your home's energy efficiency. These specially-trained contractors evaluate your home using state-of-the-art equipment and recommend comprehensive improvements that will yield the best results.



HOME  
PERFORMANCE  
WITH  
ENERGY STAR



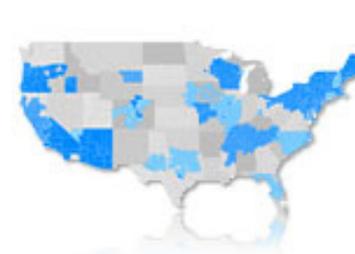
**Watch Video: A Comprehensive Approach to Home Improvement**



**Read More about What to Expect from Home Performance**

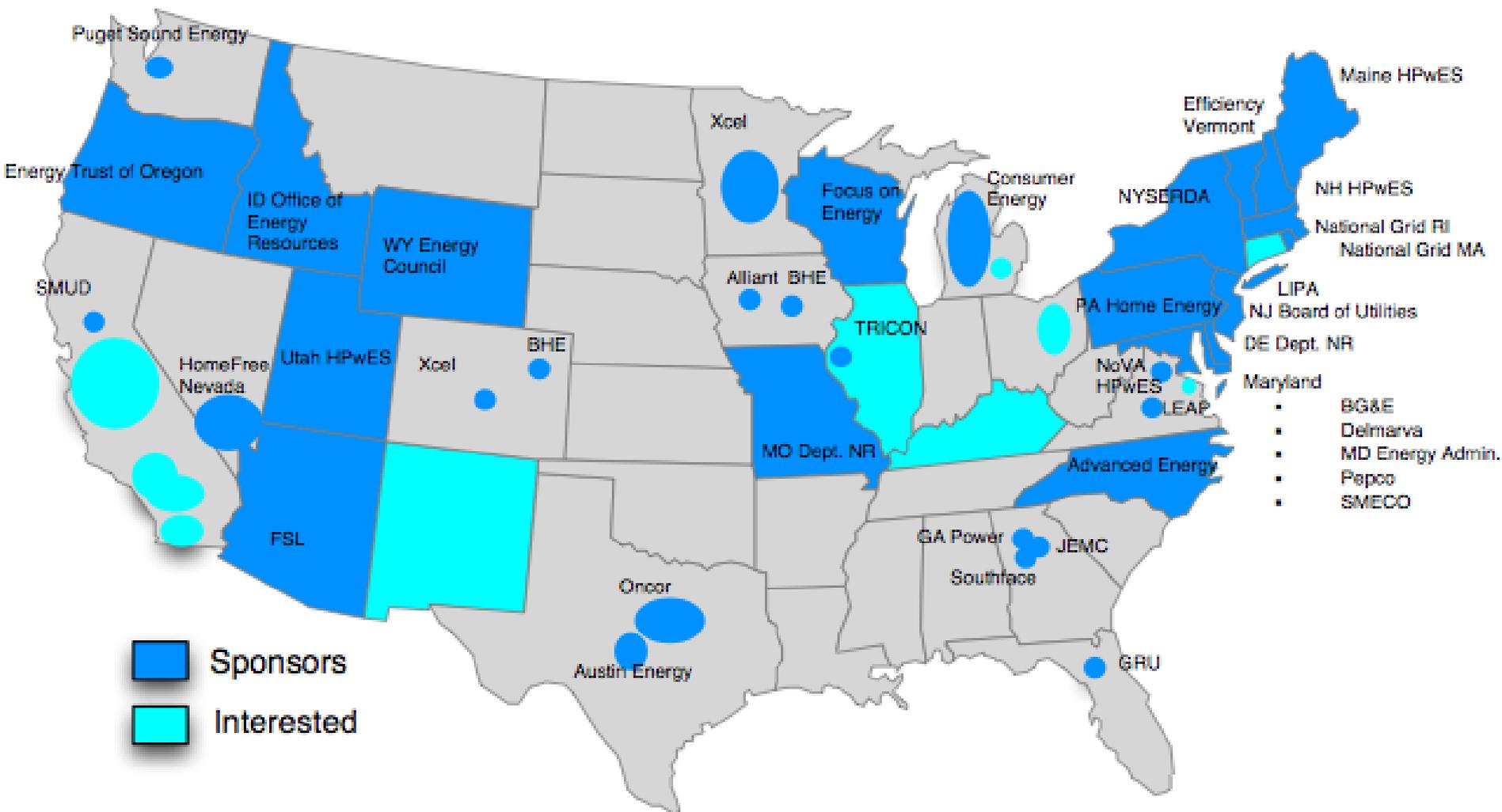


**Read Home Performance Stories from Real Families**

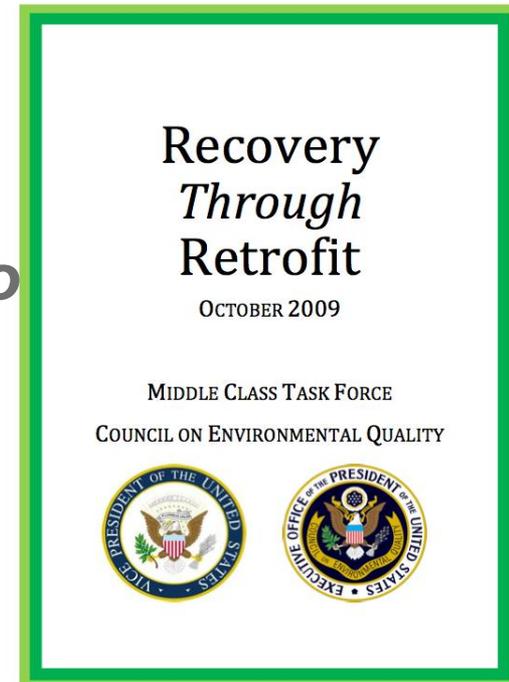


**Home Performance with ENERGY STAR Locations**

# Program Components



- ***Market Barrier 1: Consumers need reliable home retrofitting information to make informed decisions***
- ***Market Barrier 2: The costs of home retrofit projects are beyond the average homeowner's budget***
- ***Market Barrier 3: Increase the number of skilled workers and green entrepreneurs to successfully expand efficiency retrofit programs on a national- scale***



## BARRIERS

### Access to Information:

Consumers do not have access to straightforward and reliable information.

### Access to Financing:

Homeowners face high upfront costs and are often unable to recoup the value of their investment.

### Access to Skilled Workforce:

There is an insufficient amount of skilled workers to expand energy retrofit programs on a national level.

## Program Elements

QA/QC

Demand

Supply

- Close to \$400 million total, allocated to 8 – 20 winners (\$5 to \$75 million each)
- “Fundamentally and permanently transform energy markets...”
- “Comprehensive community-scale energy-efficiency approaches...”
- “Leverage...multiple local jurisdictions”
- FOA issued “in conjunction with Recovery Through Retrofit” – and announced a few days afterwards

- Retrofit for Energy and Environmental Performance
  - Replace current tax credits – still have prescriptive element
  - \$3,000 for demonstrated 20% reduction, \$1,000 for each 5% improvement (e.g., 30% = \$5,000). Up to 50% of retrofit costs.
  - Rely on EPA to define contractor standards (e.g., BPI)
  - Rely on establishment of national standard for software development (BESTEST-EX)
  - Passed House, in Senate. While REEP has bipartisan support, current legislative vehicle does not (cap and trade).

- Passed the House, Senate may consider in September
- Two levels:
  - Silver Star - prescriptive measures up to \$3,000
  - Gold Star – performance based - \$3,000 for 20% reduction, a 50% reduction could result in \$8,000
- Could have financing component
- QA/QC similar to HPwES

## Contractor Training and Requirements

- BPI Building Analyst Certification
- BPI Home Performance Contractor Accreditation
- Completion of 24 jobs, or \$180,000 in work, each year beginning in second year
- Utilize local community college for training

## Marketing

- TV, cable, and print advertising
- Successful co-op advertising program
- Regional and local specific marketing
- Cross promotion with other NYSERDA programs, marketing of ENERGY STAR brand

## Incentives

- Homeowners:
  - ENERGY STAR Financing: unsecured loan up to \$20,000 (terms of 3, 5, 7 or 10 years); available to owner-occupied 1- or 2-family homes. (NYSERDA buys down the interest rate of the loan.)
- OR
- 10% of the cost of eligible energy efficiency improvements, up to a maximum incentive of \$3,000,
- Contractors:
  - Reimbursements on training and equipment
  - Free TREAT software
  - Early buy-in cash incentive
  - 5% rebate for reporting audit
  - 2% bonus up to \$400 for referrals to other BPI contractors
  - Cash awards ranging from \$25 to \$130 for every installed eligible ENERGY STAR product



## Residential Retrofits Yield Substantial Savings

Utah Home Performance with ENERGY STAR offers a comprehensive, whole-house approach to home improvement that results in better energy efficiency, greater comfort and lower energy bills. Specially trained analysts visit your home to perform an energy assessment and provide a customized energy- and cost-saving action plan, comparing what you pay now to what you could be paying when your home runs at peak performance. If you choose to make energy efficiency improvements using a Utah Home Performance contractor you may qualify for cash back on a percentage of the job cost, in addition to utility rebates and tax credits!



[Learn more about our program, how it works, and what an energy audit entails here.](#)



- Covers 50-80% of energy-efficient home improvement costs
- Target a 20% reduction in energy usage per home
- Estimates 2800 assessments with 750 improvements
- \$100 entry point – NO FREE AUDITS!!

Utah Home Performance with ENERGY STAR® is funded by the US Dept of Energy and administered by the Utah State Energy Program  
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- \$110M via CPUC for Investor Owned Utility programs.

- Currently CPUC has approved approximately \$20M for performance-based (HPwES) retrofit IOU programs and pending approval for approximately \$90M prescriptive retrofit programs. [Statewide Prescriptive Whole House Retrofit Program (PWHRP) Program Implementation Plan filed January 29, 2010 by PG&E on behalf of the IOUs in PG&E Advice Letter 0807-G/0608-E.]

**CPUC Program targets for improved homes for investor owned utilities\***

|                  | 2010         | 2011          | 2012          |
|------------------|--------------|---------------|---------------|
| PG&E             | 3,900-5,700  | 5,400-8,400   | 6,200-9,200   |
| SCE              | 3,000-4,100  | 4,100-5,800   | 4,700-6,600   |
| SCG              | 1,700-2,700  | 2,400-3,700   | 2,800-4,300   |
| SDG&E            | 900-1,690    | 1,300-2,400   | 1,400-2,700   |
| Statewide Totals | 9,500-14,200 | 13,200-20,300 | 15,100-22,800 |

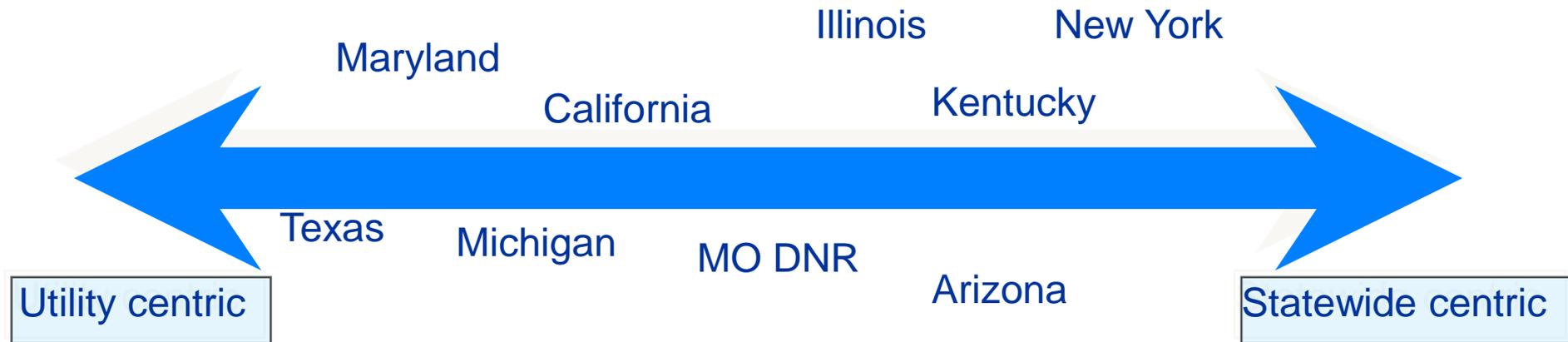
\*Source Prescriptive Whole House Retrofit Program Webinar, Feb 9, 2010

## ARRA SEP Funding

- California Comprehensive Retrofit Program – launching 2010
  - \$20M - Sacramento Municipal Utility District includes HPwES program
  - \$16M - Regional Council of Rural Counties
  - \$11M – Association of Bay Area Governments
  - \$3M – The SF Mayor’s Office of Housing
- CaliforniaFirst: Municipal Financing for EE and RE residential improvements
  - The CaliforniaFIRST Program is anticipated to launch with a pilot group of jurisdictions, consisting of 14 counties and up to 146 cities
  - \$16M - Sacramento County
  - \$5M – City of LA
  - \$4M - County of Humboldt
  - \$3M - City of Sonoma
  - \$2M - City and County of SF
- \$30M - Municipal and Commercial Retrofit Programs



# Emerging Models – leverage and sustainability



- Experience running DSM programs
- Consistent touch points with customers
- Historically high level of satisfaction with customers
- More consistent funding stream
- More sophisticated IT backend infrastructure
- Access to utility billing data
- Lead market actor in Advanced Metering Initiatives
- Established relationship with trade contractors

- Avoid duplicate infrastructure
  - common software
  - consistent QA protocols
  - consistent methodology to calculate energy savings
- Fuel neutral
- Aggregated contractor/auditor base
  - standard requirements - insurance, certifications, protocols
  - common listing on website
- More seamless homeowner experience
  - Unified website
  - Consistent branding / messaging
  - Financing

U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

**Solution Center** *Technical Assistance for EECBG & SEP*

Webcasts | Project Map | Recovery Act Benefits Savings Calculator | Request Technical Assistance | Home

- Buildings**
- Electric Power and Renewable Energy**
- Energy Education**
- Industry**
- Policy, Planning, and Energy Security**
- Transportation**
- Financial Products**

The Solution Center is the home for Energy Efficiency and Conservation Block Grant (EECBG) Program and State Energy Program (SEP) technical assistance resources. The goal of the Solution Center is to help eligible grantees and sub-grantees develop and implement successful energy efficiency and conservation projects and programs that meet the conditions and guidelines of the EECBG and SEP programs. Please spend some time exploring this page and take full advantage of the resources available.

**Upcoming Webcasts**

Cutting Residential, Commercial, and Industrial Energy Use: Tools and Incentives that Work  
 Date: July 8, 2010  
 Time: 3:00-4:00 EST

[Register Here](#)

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EERE Information Center  
 Programs and Offices

**FEATURES**



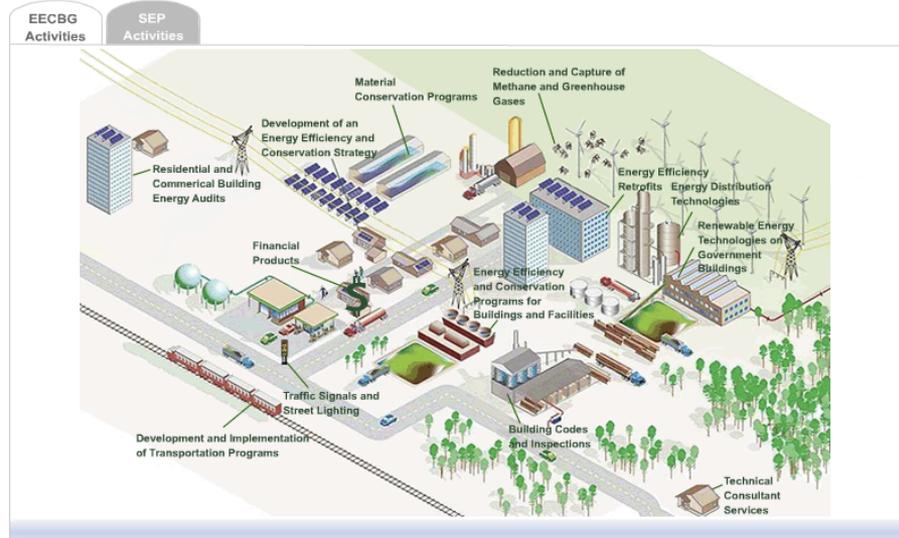
**Weatherization & Intergovernmental Program Guidance**



**Technical Assistance Program Blog**

**Activities**

The Solution Center has gathered best practices, tools, sample projects, and other related resources for all eligible EECBG and SEP activities. Find resources for your projects via the maps below or the menu on the left-hand side of this page.







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Partner Resources

**Home Improvement** [Home](#) > [Home Improvement](#) > [Home Performance with ENERGY STAR](#) > [For Sponsors](#) > [How to Develop a Local Program](#)

## How to Develop a Local Program

**Who can become a sponsor?**  
Organizations that are typically eligible to sponsor a Home Performance with ENERGY STAR programs include utilities, states, municipalities, and non-profit organizations that promote energy efficiency and renewable energy.

**What is the role of the program sponsor?**  
A Home Performance with ENERGY STAR sponsor is responsible for overseeing the program's implementation and the performance of participating contractors to ensure that quality standards are met. To be effective in this role a sponsor must be legally and financially independent from participating contractors. Sponsoring a program is a significant commitment and will require an investment of financial resources. Therefore, organizations should establish a budget and identify a consistent source of revenue before making a commitment.

**Where do I start?**  
All program sponsors sign an [ENERGY STAR Partnership Agreement](#) and submit a Program Implementation Plan for ENERGY STAR to review. The Program Implementation Plan documents how the local program's policies and procedures meet national program requirements. Download a copy of our [Sponsor Guide](#) (910KB) and our [Program Implementation Plan Template](#) (800KB) to help you get started.

**Federal Grant Opportunities for Home Performance Sponsors**  
Federal agencies such as HUD and DOE offer [grant programs](#) (169KB) whose funds can be used to support energy efficiency efforts for existing homes, including affordable housing. Organizations can apply for funding under these grant programs to develop and implement energy efficiency programs, including the development of a Home Performance with ENERGY STAR program.

For additional information and support for developing a local Home Performance with ENERGY STAR program, contact:

- [HomePerformance@EnergyStar.gov](mailto:HomePerformance@EnergyStar.gov)
- Chandler von Schrader at EPA (202-343-9096; [yonschrader.chandler@epa.gov](mailto:yonschrader.chandler@epa.gov))

Go to [Marketing Resources](#)

**Participate in the ENERGY STAR Mortgage Pilot Program**  
An [ENERGY STAR mortgage pilot program](#) is underway to demonstrate that financing can be a useful tool in promoting whole-house, energy-efficient retrofits. Homes that improve their energy efficiency by at least 20% under a Home Performance program are eligible for financing under this pilot program.

**Quick Finder**

- [Intro to HPwES Fact Sheet](#) (621KB)
- [Sponsor Guide](#) (910KB)
- [Program Implementation Plan Template](#) (800KB)
- [Contractor Success Stories](#)
- [Financing Guidebook](#) (3.15MB)
- [Partnership Agreement](#) (86KB)
- [Marketing Resources](#) (1.27MB)
- [HPwES Newsletters](#)

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 [DOE Home](#)  
[DOE Search](#)

 [EPA Home](#)  
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The screenshot shows the ENERGY STAR website interface. At the top, there is a navigation bar with tabs for 'Products', 'Home Improvement', 'New Homes', 'Buildings & Plants', and 'Partner Resources'. The main content area is titled 'Home Performance with ENERGY STAR Locations' and lists various states with links to local stakeholders. A 'Quick Finder' sidebar on the right lists documents like 'Intro to HPwES Fact Sheet' and 'Sponsor Guide'.

**ENERGY STAR** | Products | Home Improvement | New Homes | Buildings & Plants | Partner Resources

**Home Improvement** | Home > Home Improvement > Home Performance with ENERGY STAR > Partner Locations

### Home Performance with ENERGY STAR Locations

Home Performance with ENERGY STAR is currently available in the following areas:

- Arizona**
  - [FSL Home Improvements](#) EXIT <
- California**
  - [Sacramento Municipal Utility District \(SMUD\)](#)
  - [California Building Performance Contractors Association \(CBPCA\)](#) EXIT <
- Colorado**
  - [Black Hills Energy CO](#)
  - [Xcel Energy, Inc.](#) EXIT <
- Delaware**
  - [State of Delaware, Department of Natural Resources & Environmental Control](#)
- Florida**
  - [Gainesville Regional Utilities \(GRU\)](#) EXIT <
- Georgia**
  - [Jackson Electric Membership Corporation \(EMC\)](#) EXIT <
  - [Georgia Power Company](#) EXIT <
  - [Southface Energy Institute](#) EXIT <
- Iowa**
  - [Alliant Energy - Interstate Power and Light](#)
  - [Black Hills Energy IA](#)
- Idaho**
  - [Idaho Office of Energy Resources](#) EXIT <
- Illinois**
  - [Tri-County Construction Labor-Management Council \(TRICON\)](#) EXIT <
- Massachusetts**
  - [National Grid \(MA\)](#) EXIT <
- Maryland**
  - [Peppo](#)
  - [Delmarva Power](#)
  - [Southern Maryland Electric Cooperative \(SMECO\)](#)
  - [Constellation Energy/Baltimore Gas and Electric Company \(BG&E\)](#) EXIT <
  - [Maryland Energy Administration](#) EXIT <
- Maine**
  - [Maine Home Performance with ENERGY STAR](#) EXIT <
- Michigan**
  - [Consumers Energy](#)
- Minnesota**
  - [Xcel Energy](#)
- Missouri**
  - [Missouri Department of Natural Resources](#) EXIT <
- North Carolina**
  - [Advanced Energy](#)
- New Hampshire**

**Quick Finder**

- [Intro to HPwES Fact Sheet](#) PDF (621KB)
- [Sponsor Guide](#) PDF (910KB)
- [Program Implementation Plan Template](#) PDF (800KB)
- [Contractor Success Stories](#)
- [Financing Guidebook](#) PDF (3.15MB)
- [Partnership Agreement](#) PDF (86KB)
- [Marketing Resources](#) PDF (1.27MB)
- [HPwES Newsletters](#)

homeperformance@energystar.gov

## Building Performance Institute www.bpi.org

The screenshot shows the BPI website with a green header and navigation menu. The main content area features a large article titled "Comfort Health Safety Durability Energy efficiency" with a photo of a house. Below this are several smaller sections: "Getting Gold Star Ready" with a "WATCH WEBINAR" button, "HOME STAR is Coming!" with a "Learn more..." link, "Find a GOLD STAR Accredited Contractor near you" with a "Click here to search" button, "Homeowners: Tell us about your experience" with a "Consumer Feedback" button, "Training Affiliate Organizations" with a "Click here to learn find out how to become a BPI Training Affiliate" link, "Certified Professionals" with a "Click here to learn how you can get certified" link, and "Accredited Contracting Companies" with a "Click here to find out how to get your company BPI accredited" link. The footer contains information about raising the bar in home performance contracting and turn-key infrastructure for rapid program deployment and expansion.

The screenshot shows the RESNET website with a dark header and navigation menu. The main content area features a large banner for "Get the Job Done Right!" with a photo of a couple and a "Find a RESNET Professional (1-800-785-8154)" button. Below this are several sections: "ENERGY AUDITS & RATINGS" with links to "What is a Home Energy Audit?", "Benefits of a Home Energy Audit", "What is an Energy Rating?", and "Why use a RESNET-Certified Auditor or Rater?"; "ENERGY EFFICIENT BUILDING & RETROFITS" with links to "What is an ENERGYSMART Contractor?", "Why use an ENERGYSMART Contractor?", "How to Choose the Right Contractor", and "Energy Efficient Mortgage Information"; "RATER?" with a "Interested in becoming a Rater?" section and a "READ MORE" button; "Find Raters and Auditors" with a "Search for Certified Energy Raters and Auditors" and a "CLICK HERE" button; "Find Contractors and Builders" with a "Search for ENERGYSMART Contractors & Builders" and a "CLICK HERE" button; "VIDEOS" with a "WATCH NOW" button; "ENERGY SAVING TIPS" with a "WATCH NOW" button; "HEADLINES" with a "WATCH NOW" button; and "eNEWSLETTER SIGN UP" with a "GET ENERGY-SAVING TIPS!" section and a "SIGN UP" button.

**RESNET** www.resnet.us

Home Performance Resource Center  
[www.hprcenter.org](http://www.hprcenter.org)

Efficiency First [www.energycfirst.org](http://www.energycfirst.org)

## • Best Practices Committees

- Nine case studies analyzing successful program
- Best Practices White Paper
- Finance and Incentives Recommendations
- Marketing Recommendations
- Workforce Development Recommendations
- Business Model Recommendations

The screenshot shows the Efficiency First website homepage. At the top, there is a navigation bar with the Efficiency First logo and the tagline "America's Home Performance Workforce". The navigation menu includes links for "About Efficiency First", "Contractor Resources", "Chapters", "Take Action", "Join Today", "Members", "My Account", "Blog", and "Contact Us". A "Join Efficiency First or Login" button is located in the top right corner. The main content area features a section titled "What is Efficiency First?" with a paragraph describing the organization as a national nonprofit trade association. Below this is a quote from Rep. Peter Welch, Vermont: "We should have the policy of efficiency first". The "Mission" section follows, stating the organization's goal to create a sustainable and scalable home retrofit market. On the right side, there are two sidebar sections: "HOME STAR Program Update" with a link to "Proposed national incentives for residential efficiency retrofits" and "News From Our Blog" with a link to "HOME STAR Coalition Addresses ACCA Concerns".

Have a greater understanding of the local, regional, and national efforts to promote energy efficiency in residential buildings

Have a greater understanding of the programmatic elements of residential building audit and retrofit programs and how those may or may not align with your programs

Learn about additional resources that you can access to address residential retrofit issues and concerns

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Information and resources from this webinar can be found using the links below. The PowerPoint from the webinar will be posted on the DOE Solution Center at:

<http://www1.eere.energy.gov/wip/solutioncenter/webcasts/default.html>

•ENERGY STAR Web site for homeowners:

[http://www.energystar.gov/index.cfm?c=home\\_improvement.hm\\_improvement\\_index](http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_index)

•ENERGY STAR Web site to develop or support a local program

[http://www.energystar.gov/index.cfm?c=home\\_improvement.hpwes\\_sponsors\\_develop](http://www.energystar.gov/index.cfm?c=home_improvement.hpwes_sponsors_develop)

•DOE Solution Center:

[www.eere.energy.gov/wip/solutioncenter](http://www.eere.energy.gov/wip/solutioncenter)

•DOE Technical Assistance Center:

<https://tac.eecleanenergy.org/>

•Home Performance Research Council – best practices on financing, marketing, workforce development, business models, and other topics. Case studies are included:

<http://www.hprcenter.org/>

<http://www.surveymonkey.com/s/audits>